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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of	)	
	)	
Prescribing the Authorized Unitary Rate of Return for Interstate Services of Local Exchange Carriers	)	CC Docket No. 98-166

REBUTTAL COMMENTS OF BELL ATLANTIC[1]

Three new cost of capital studies were submitted in the most recent round of comments. Two of them, including the analysis by Professor James Vander Weide that was attached to Bell Atlantic's reply comments, recognize that as a result of increased risk, local exchange carriers' cost of capital is higher than the 11.25 percent benchmark. The third new study, submitted by AT&T, is so riddled with flawed assumptions that its conclusions should be rejected out of hand. Indeed, the only way AT&T is able to manipulate data to reach a lower cost of capital is to make assumptions that are not only in conflict with accepted financial theory, but are even inconsistent with the published views of its own experts.

The same parties that argue for a reduction in the benchmark cost of capital also seek a modification of price cap regulation to further line their own pockets by forcing

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[1] The Bell Atlantic telephone companies ("Bell Atlantic") are Bell Atlantic-Delaware, Inc.; Bell Atlantic-Maryland, Inc.; Bell Atlantic-New Jersey, Inc.; Bell Atlantic-Pennsylvania, Inc.; Bell Atlantic-Virginia, Inc.; Bell Atlantic-Washington, D.C., Inc.; Bell Atlantic-West Virginia, Inc.; New York Telephone Company; and New England Telephone and Telegraph Company.

arbitrary and unjustified reductions in access rates -- reductions that experience has proven they will find a way to pocket. In particular, they ask the Commission to make an exogenous cost adjustment in price cap regulation to reflect a new rate of return benchmark. This attempt to resurrect rate of return regulation as a way of reducing price cap indices goes beyond the scope of this rulemaking; and regardless, has already been rejected by the Commission when it found that such a change would have "substantial pernicious effects" on the objectives of price cap regulation. *Price Cap Performance Review for Local Exchange Carriers*, 12 FCC Rcd 15982 at ¶ 292 (1997) ("Price Cap Order").

I. The Cost Of Capital For Incumbent Local Exchange Carriers Exceeds 11.25%

In the initial round of comments here, Bell Atlantic and other local exchange carriers demonstrated that the increased risk of the local access market more than offsets any reduction in the cost of debt and results in a cost of capital above 11.25%.[2] MCI (p. 10) complains that local exchange carriers have failed to quantify the impact of that change, but that concern was remedied in the second round of comments here where Professor Vander Weide performed a full cost of capital analysis and concluded that the current local exchange carrier cost of capital is in the range of 12.7%-13.2%.[3]

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[2] GSA (p. 4) argues that because the local exchange carriers advocate a termination of this inquiry, they lack conviction in their own demonstration that the cost of capital has increased. In fact, the local carriers argue against the premise of this proceeding, that a drop in Treasury Bond interest rates means that there has been a reduction in carriers' cost of capital. If the Commission does go forward with this inquiry, it should increase the benchmark cost of capital consistent with the carriers' studies.

[3] USTA also provided a cost of capital analysis which supported the view that the current cost of capital exceeds 11.25%.

The only party that purported to submit a new cost of capital analysis that indicated that the cost of capital was below 11.25% was AT&T.[4] But AT&T's analysis is so riddled with erroneous assumptions as to make it useless in any reasoned analysis of cost of capital.

AT&T relies on a so-called "three-stage" discounted cash flow model. Under this model, AT&T rejects financial analysts' projection of long term growth as unsustainable; and instead simply assumes without support that long term growth will match the growth for the economy as a whole. In fact, long term growth rates in excess of current projections for local exchange carriers have been sustained for long periods by a number of companies, including telecommunications carriers like MCI/WorldCom. *See* Rebuttal Affidavit of Professor James Vander Weide, ¶ 34, attached to these comments. Moreover, AT&T's growth assumptions lead to irrational results. Using AT&T's method, companies that AT&T claims are more risky actually have a lower cost of capital than ones which they argue have lower risk. Vander Weide Rebuttal Affidavit, ¶ 38. For example using the AT&T method, the cost of capital for the S&P 500 is significantly less than for the local exchange carriers, and the average cost of capital for AT&T, MCI and Sprint is even lower (7.75%). Vander Weide Rebuttal Affidavit, ¶¶ 40, 42.

Underlying AT&T's argument is a reliance on a backward looking book-value capital structure (based on accounting values) rather than a market-valued capital structure that reflects current capital valuation. As Bell Atlantic previously demonstrated,

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[4] GSA filed a direct case with a cost of capital calculation below 11.25%, but when errors in that analysis were corrected, it actually supported the conclusions in Dr. Vander Weide's study. *See* Vander Weide Reply Affidavit, ¶¶ 5-67.

use of book values for this purpose is universally rejected by economists. Indeed, AT&T's own experts have published texts that support a market weighting and reject book value. Vander Weide Rebuttal Affidavit, ¶ 16.

AT&T attempts to defend its choice by arguing that book value of the holding companies is a better representation of local exchange carrier capital structure than the current holding company capital structure because it more closely resembles what the monopoly era capital structure was like. But, as Bell Atlantic previously demonstrated, local exchange carriers no longer operate as a monopoly and their current financial structure reflects their more competitive circumstances. Vander Weide Reply Affidavit, ¶ 60. Regardless, book value, which is merely an accounting measure of retained earnings, does not represent actual capital structure even for the past periods that AT&T claims should be mimicked today. In fact, book value includes the impact of accounting adjustments that have no impact on actual capital structure. Vander Weide Rebuttal Affidavit, ¶ 21. Moreover, while AT&T claims that holding companies are likely to abandon their current capital structure, it presents no evidence to support this assertion and indeed, comparison with other industries suggest that AT&T is just wrong.[5] Vander Weide Rebuttal Affidavit, ¶ 20.

AT&T uses the regional Bell holding companies as its proxy for the local exchange carrier industry. But, as Dr. Vander Weide demonstrated in his reply affidavit,

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[5] AT&T suggests that Professor Vander Weide has supported adoption of book value capital structure in other proceedings, but this is an "egregious misrepresentation" of Professor Vander Weide's actual testimony. Vander Weide Rebuttal Affidavit, ¶ 23. In fact, in the proceeding cited by AT&T, Professor Vander Weide did not address the issue of market vs. book value, but accepted the framework demanded by the State Commission with jurisdiction over that proceeding.

because of mergers and other changes, the regional holding companies lack the stability to meet the requirements of the discounted cash flow model. Vander Weide Reply Affidavit, ¶¶ 28-35 and Vander Weide Rebuttal Affidavit, ¶ 25. Moreover, limiting the proxy to the regional holding companies provides too small a number of companies to provide a basis to run a discounted cash flow model. Vander Weide Reply Affidavit, ¶ 36 and Vander Weide Rebuttal Affidavit, ¶ 26.

To support their arguments for a lower cost of capital, AT&T also cites to a different type of model, a capital asset pricing model ("CAPM"), as well as the purported conclusions of investment banks in documents related to Bell Atlantic's merger with NYNEX. In fact neither of these citations provides any legitimate support for AT&T's position.[6]

The AT&T CAPM adopts the same flawed assumptions as their three stage model, and therefore has the same deficiencies, which bias its results downward. Vander Weide Rebuttal Affidavit, ¶ 48. As part of its CAPM calculation, AT&T must determine the "risk premium" – the extra return required to compensate investors for the risk associated with the local exchange carriers. But the method used by AT&T produces an

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[6] While unrelated to the level of the cost of capital, AT&T also claims justification through release of audit reports concerning local exchange carrier central office equipment. But the Commission's order releasing the reports expressly declined to draw any conclusion about the validity of any assertion or recommendation in the reports. Indeed, one Commissioner commented that he had rarely "seen numbers as indefensible as the extrapolations of missing equipment contained in these orders." Dissenting Statement of Commissioner Harold Furchtgott-Roth, Bell Telephone Companies Continuing Property Records Audit Orders, ASD File Nos. 99-22 et al., at 9 (rel. March 12, 1999). Regardless, the audit concerned only engineering records and did not in any way review USOA accounts that form the cost basis for rate of return calculations.

artificially low risk premium and is even inconsistent with the calculation method advocated by AT&T's expert in his published text. Vander Weide Rebuttal Affidavit, ¶ 50. Indeed, AT&T goes so far as to mischaracterize the risk premium calculated by Ibbotson (a primary source for financial data). Contrary to AT&T's claims, Ibbotson calculates risk premium consistent with the financial mainstream, which results in an increase in AT&T's calculation by hundreds of basis points. *See* Vander Weide Rebuttal Affidavit, ¶ 60.

AT&T's citation to Bell Atlantic merger documents are equally misleading. In the first place, by their own terms the documents are clear that they are not intended as cost of capital estimates, but rather to determine exchange ratios for the valuation of a merger. The "assumed discount rate for that calculation can not be used to support a cost of capital calculation or any other extraneous purpose," and the documents containing the calculation make that clear. *See* Vander Weide Rebuttal Affidavit, ¶ 58.

Even if the calculations could be used for the purpose claimed by AT&T, which they cannot, AT&T further distorts the calculation by comparing after-tax numbers with the Commission's before-tax cost of capital estimate. This mismatch alone represents a difference of 50 to 100 basis points. Vander Weide Rebuttal Affidavit, ¶ 57.

Not only does AT&T misuse the discount rates used in the merger documents, it ignores actual Wall Street estimates of cost of capital for the telecommunications industry, which show after-tax values of in a range of 10.6% to 14.4%, well above AT&T's estimate, and consistent with the estimates of Professor Vander Weide. Vander Weide Rebuttal Affidavit, ¶ 60.

II. The Commission Should Not Represcribe Price Cap Indices To Reflect A New Cost of Capital Benchmark

For the first time in their reply comments, several parties seek unjustified reductions in access rates by arguing that the Commission should adjust the local exchange carrier price cap index to reflect a reduced cost of capital as an exogenous cost. Consideration of such a change goes beyond the scope of this proceeding and cannot be considered here. Regardless, the Commission has already appropriately rejected such a change as inconsistent with price cap regulation.

The proposed change was not contemplated in the Commission's notice as required by the Administrative Procedures Act ("APA"). The APA requires an agency to provide notice of a proposed rule and an opportunity for comment. 5 U.S.C. § 553(b) and (c). "These requirements, which serve important purposes of agency accountability and reasoned decision making, impose a significant duty on the agency." *American Medical Association v. Reno*, 57 F.3d 1129 (D.C. Cir. 1995). In this proceeding, the only mention of impact on price cap carriers relates to the lower formula adjustment. Notice, ¶¶ 53-55. Any change to price cap indices is neither noticed nor contemplated in the Commission's rulemaking. As a result, the Commission is procedurally barred from considering AT&T's improper request.

Regardless, the Commission has already rejected a restructuring of access rates to reflect cost of capital changes in the its review of the price cap plan. There, the Commission found that that its market-based approach was the soundest method to control rates and that "rate of return-based reinitialization would have substantial

pernicious effects on the efficiency objectives" of the Commission's price cap policy.[7] *Price Cap Order* at ¶ 291. The Commission got it right then, and there is no basis to revisit that decision. Price cap regulation was intended to break the link between costs and rates. As the Commission understood, there is no basis to treat that one cost as exogenous to price cap regulation and all other costs as endogenous. Indeed, to do so would unreasonably skew decision making to conform to arbitrary regulatory anomalies. If the Commission were to isolate capital cost changes as exogenous, "it would create a distortion in the regulated LEC's choice of inputs and would undermine the improvements in incentives that price regulation was intended to bring." *Price Cap Performance Review*, CC Dkt. 94-1, National Economic Research Associates, Inc report: "Economic Performance of the LEC Price Cap Plan," filed as attachment 4 to the Reply Comments of the United States Telephone Association (filed June 29, 1994).

Exogenous treatment for a change in capital costs is also inconsistent with the Commission's rules for exogenous costs. Cost of capital changes are not among the specific exogenous changes contemplated by the rules. *See* 47 C.F.R. § 61.45(d). Moreover, cost of capital changes do not meet the generic requirements for an exogenous cost because changes in the cost of capital are already reflected in the GDP-PI and to include a separate exogenous change would be double-counting.[8] The GDP-PI captures

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[7] An exogenous adjustment based on a revised rate of return is merely another method to reinitialize rates to reflect a revised cost of capital benchmark.

[8] Under Commission rules, part of the determination of whether a particular change is exogenous includes an analysis of whether the cost change is already reflected in the price cap formula. *See Policy and Rules Concerning Rates for Dominant Carriers*, 6 FCC Rcd 2637, ¶ 63 (1991).

the overall cost of capital for economy as a whole, including the generic drop in interest rates that precipitated this proceeding. In the earlier price cap review, Dr. Laurits Christensen found that the Moody's composite yield for public utility bonds "mirrored changes that took place in all market interest rates in the United States." Price Cap Performance Review, CC Dkt. 94-1, USTA Ex Parte (Feb 1, 1995), Affidavit of Dr. Laurits R. Christensen at 7; *see also* chart attached to affidavit and reproduced here as Exhibit 2. Moreover, as Dr. Vander Weide explains: "The productivity offset incorporates any differences between economy-wide and telecommunications-industry-specific input prices. Thus, the benefits of any reductions in capital market costs that AT&T alleges have occurred would have already been passed through to ratepayers." Vander Weide Rebuttal Affidavit, ¶ 64.

Conclusion

The Commission should either make an upward adjustment to the prescribed cost of capital and the benchmark for lower formula adjustments, or none at all.

Respectfully submitted,

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Of Counsel

April 8, 1999

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REBUTTAL AFFIDAVIT OF JAMES H. VANDER WEIDE

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REBUTTAL AFFIDAVIT OF JAMES H. VANDER WEIDE

I. Introduction

1. My name is James H. Vander Weide. I am Research Professor of Finance and Economics at the Fuqua School of Business, Duke University. I am also President of Financial Strategy Associates, a firm that provides financial and economic consulting services primarily to companies in the electric, gas, insurance, telecommunications, and water industries. My business address is 3606 Stoneybrook Drive, Durham, North Carolina.

2. I previously submitted affidavits in this proceeding on behalf of Bell Atlantic, GTE, and US West on January 19, 1999, and March 16, 1999. In my earlier affidavits I emphasized the need for the Commission to: (1) use current market values rather than historical costs to estimate the cost of debt and capital structure components of the weighted average cost of capital for those local exchange carriers ("ILECs"[1]) still subject to rate of return regulation; (2) send correct economic signals to potential entrants who must choose between leasing access from incumbents and building their own facilities; (3) recognize the significantly increased risks facing ILECs in providing access services; and (4) recognize that a correct estimate of the cost of

[1] Like the FCC, I use the acronym "ILECs" in this proceeding to refer to those local exchange carriers still subject to rate of return regulation. In more general usage, the acronym "ILECs" refers to all incumbent local exchange carriers, not just to those still subject to rate of return regulation.

capital, using market values, a market interest rate, and a market cost of equity, would likely exceed the Commission's currently authorized 11.25 percent rate of return. Indeed, in my reply affidavit submitted in March, I provided strong evidence that the ILECs' weighted average cost of capital is in the range 12.75 percent to 13.15 percent, based on a 6.68 percent market cost of debt, a 14.77 percent cost of equity, and a target market value capital structure containing between 75 percent and 80 percent equity.

3. On March 16, 1999, AT&T filed its Responsive Submission to the testimonies of other parties in this proceeding. As part of their Responsive Submission, AT&T filed an affidavit prepared by Bradford Cornell and John I. Hirshleifer ("Cornell/Hirshleifer") which contains an estimate of the ILECs' weighted average cost of capital in the range 8.5 percent to 9.5 percent. Using this recommended range as a starting point, AT&T recommends an allowed rate of return for the ILECs in the range 8 percent to 9 percent, based on its recommendation that the Commission include a 50 basis point downward adjustment to reflect the purportedly low business risk of providing interstate access services and the decline in interest rates since the time of their cost of capital estimate, which uses year-end 1997 data.

4. I have now been asked by Bell Atlantic, GTE, and U S West to review the Responsive Submission of AT&T, including the Cornell/Hirshleifer Affidavit, and to respond to their cost of capital studies and recommended overall allowed rate of return for the ILECs. I will first respond to the cost of capital studies contained in the Cornell/Hirshleifer Affidavit. I will then respond to AT&T's recommendations to require the price cap LECs to adjust the price cap indices downward to reflect the alleged decrease in capital costs since price caps were initiated.

II. Summary

5. From my review of the Cornell/Hirshleifer Affidavit, I conclude that Cornell/Hirshleifer have significantly underestimated the ILECs' weighted average cost of

capital. Their underestimate is caused by: (1) their use of historically oriented book value, rather than actual market value, estimates of the ILECs' capital structure; (2) their failure to recognize that the RHCs do not satisfy the basic stability assumptions of traditional cost of equity estimation techniques; (3) their use of a three-stage DCF Model which incorporates unreasonable growth expectations and produces incongruous results; (4) their failure to include quarterly compounding and flotation costs; (5) their use of historically-oriented betas that do not reflect the future risks of providing telecommunications services in a competitive environment; (6) their use of risk premiums that are significantly less than the risk premiums which Dr. Cornell has previously recommended in his published work; and (7) their assumption that interexchange access services are provided in a "quasi-monopoly" environment and are the least risky telecommunications service.[2] On the basis of my review of the Cornell/Hirshleifer Affidavit, I find no reason to change my estimate that the ILECs' weighted average cost of capital is in the range 12.75 percent to 13.15 percent.

6. Capital Structure. Cornell/Hirshleifer calculate the ILECs' weighted average cost of capital using both book and market value capital structure weights. The use of book value capital structure weights is inconsistent with both financial practice and with the economic and financial theory of corporate valuation. Financial practitioners use market value weights to measure the weighted average cost of capital because market values are the best measure of the amount of debt and equity capital invested in the company on a forward-looking basis. Economic and financial theory also incontrovertibly requires the sole use of market value capital structure weights to calculate a company's weighted average cost of capital. Indeed, Dr. Cornell recommends the use of market value weights to calculate the weighted average cost of capital in

[2] Since my previous affidavits discussed the need to include quarterly compounding and flotation costs and contained extensive discussion of the unique risks of providing interstate access services, I will not discuss these topics further in this affidavit.

his book, *Corporate Valuation*, cited in Paragraph 1 of his affidavit. Since book value equity weights are significantly lower than market value equity weights, the use of book value equity weights by itself causes Cornell/Hirshleifer to underestimate the ILECs' weighted average cost of capital by at least 52 basis points.

7. Proxy Companies. Cornell/Hirshleifer apply DCF and CAPM methodologies to the RHCs to estimate the ILECs' weighted average cost of capital. The RHCs are poor proxies for the purpose of estimating the ILECs' cost of capital because the traditional DCF and CAPM models produce results which understate the true cost of equity for companies such as the RHCs that are experiencing deregulation, competitive entry, dramatic industry restructuring, and profound technological change. Cornell/Hirshleifer could have avoided the difficulties of applying the DCF and CAPM Models to the RHCs by relying entirely on a broad group of competitive firms such as the S&P Industrials.

8. Three-Stage DCF Model. Cornell/Hirshleifer employ a three-stage DCF model in which their proxy companies' earnings are expected to grow in line with analysts' earnings growth expectations for only the next four years. After this initial period, Cornell/Hirshleifer arbitrarily assume that their proxy companies' earnings will decline over a 15-year period to their current expected growth in the GNP, 5.5 percent, and then grow at 5.5 percent forever. Cornell/Hirshleifer's basic growth assumptions are not only arbitrary, but also inconsistent with the evidence that a company's earnings can grow at the analyst's expected growth rate for many years. Cornell/Hirshleifer's incorrect and arbitrary assumptions regarding future growth cause them to significantly underestimate the ILECs' cost of equity.

9. Anomalies of the Cornell/Hirshleifer Three-Stage DCF Model. Cornell/Hirshleifer's three-stage DCF Model produces cost of capital estimates that fail the common sense standard that the cost of capital should increase with the risk of an investment.

Cornell/Hirshleifer's estimates fail to conform to this standard in several areas. First, among telecommunications companies, the companies with the highest betas have the lowest DCF results, while companies with low betas have high DCF results. Second, Cornell/Hirshleifer claim that local exchange service, including the provision of interstate access, is less risky than other telecommunications services such as interexchange service. Yet their three-stage DCF Model produces significantly lower DCF results for the interexchange carriers AT&T, MCI, and Sprint, than it does for their proxy group of RHCs. Indeed, using their methodology, the average DCF result for AT&T, MCI, and Sprint is only 7.75 percent, as compared to their result of 9.28 percent for the RHCs. Third, although Cornell/Hirshleifer claim that their telecommunications proxy group is significantly less risky than the S&P 500, their DCF result for the S&P 500 is only 8.6 percent, significantly less than their DCF result for their telecommunications proxy group. Fourth, although electric and natural gas utilities are generally considered to be less risky than the RHCs, Cornell/Hirshleifer's three-stage DCF Model produces approximately the same DCF result for electric utilities as for the RHCs, and significantly higher DCF results for natural gas companies than for the RHCs. These incongruous results provide convincing evidence that Cornell/Hirshleifer's three-stage DCF methodology simply does not provide reasonable cost of equity estimates.

10. Capital Asset Pricing Model. The CAPM approach requires estimates of the required rate of return on a risk-free security, estimates of a company-specific risk factor, or beta, and estimates of the required rate of return on the market portfolio. Cornell/Hirshleifer's CAPM analysis is compromised by their procedure for estimating their proxy companies' average beta and the expected rate of return on the market portfolio. To estimate their proxy companies' betas, for example, Cornell/Hirshleifer use five years of historical data on the market rates of return for their proxy companies and the market portfolio. These historical data surely do not reflect the

momentous changes in telecommunications industry risk caused by the passage of the Telecommunications Act of 1996. The momentous changes in telecommunications industry risk are also not included in the Barra betas Cornell/Hirshleifer use to corroborate their five-year historical betas. Since future betas for the RHCs are likely to exceed historical betas, Cornell/Hirshleifer's use of historical betas have caused them to further underestimate the ILECs' cost of equity. In addition, Cornell/Hirshleifer make no allowance for the tendency of the traditional CAPM to underestimate the cost of equity for companies whose estimated beta is less than 1.0.[3]

11. Risk Premium. Cornell/Hirshleifer estimate the expected return on the market portfolio from historical risk premium data on returns to stock and bond investors. Prior to Cornell/Hirshleifer's testimony for AT&T, Professor Cornell recommended in his published work the use of the commonly accepted arithmetic mean risk premium advocated by Ibbotson Associates, which was 7.8 percent at the time of the Cornell/Hirshleifer studies. In their testimony for AT&T, Cornell/Hirshleifer recommend a risk premium that is 230 basis points less than the Ibbotson risk premium Dr. Cornell previously recommended. Cornell/Hirshleifer's use of a significantly lower risk premium than Dr. Cornell has previously recommended, along with a historical beta that significantly underestimates the RHCs' future risk, causes them to underestimate the ILECs' CAPM cost of equity by approximately 380 basis points.

[3] The original evidence that the unadjusted CAPM tends to underestimate the cost of equity for companies whose equity beta is less than 1.0 and to overestimate the cost of equity for companies whose equity beta is greater than 1.0 was presented in a paper by Black, Jensen, and Scholes, "The Capital Asset Pricing Model: Some Empirical Tests," *Journal of Business* 45 (1972), pp. 444-455. Numerous subsequent papers have validated the Black, Jensen, and Scholes findings, including those by Litzenberger and Ramaswamy, Banz, Fama and French, and Fama and MacBeth. See, for example, Fischer Black, Michael C. Jensen, and Myron Scholes, "The Capital Asset Pricing Model: Some Empirical Tests," in *Studies in the Theory of Capital Markets*, M. Jensen, ed. New York: Praeger, 1972; Eugene Fama and James MacBeth, "Risk, Return, and Equilibrium: Empirical Tests," *Journal of Political Economy* 81 (1973), pp. 607—36; Robert Litzenberger and Krishna Ramaswamy, "The Effect of Personal Taxes and Dividends on Capital Asset Prices: Theory and Empirical Evidence." *Journal of Financial Economics* 7 (1979), pp. 163—95.; Rolf Banz, "The Relationship between Return and Market Value of Common Stocks," *Journal of Financial Economics* (March 1981), pp. 3—18; and Eugene Fama and Kenneth French, "The Cross-Section of Expected Returns," *Journal of Finance* (June 1992), pp. 427—465.

12. Overall Tests of Reasonableness. Cornell/Hirshleifer provide a misleading and highly selective review of financial data in an attempt to support the reasonableness of their recommended weighted average cost of capital for the ILECs. The data presented are misleading because Cornell/Hirshleifer fail to acknowledge that: (1) the cited data are calculated on an after-tax basis, and hence are not directly comparable to their before-tax estimate of the ILECs' weighted average cost of capital; (2) the cited data from Merrill Lynch and Salomon Smith Barney are not estimates of the ILECs' weighted average cost of capital; and (3) Merrill Lynch and Salomon Smith Barney have specifically warned against the use of their data outside of the context for which it was intended. Cornell/Hirshleifer also fail to refer to sources such as the well-known Ibbotson Associates' cost of capital estimates for telecommunications firms, which, not surprisingly, are significantly higher than the Cornell/Hirshleifer estimate of the ILECs' weighted average cost of capital. The Ibbotson estimates, on a before-tax basis, are some 200 to more than 500 basis points higher than the Cornell/Hirshleifer estimate.

III. Capital Structure

13. Cornell/Hirshleifer attempt to calculate the ILECs' forward-looking economic cost of capital by computing a weighted average of the RHCs' cost of debt and cost of equity. To estimate the ILECs' weighted average cost of capital, Cornell/Hirshleifer use both book and market value capital structure weights. Using book value capital structure weights containing 53 percent debt and 47 percent equity, Cornell/Hirshleifer estimate the ILECs' weighted average cost of capital to be 8.12 percent. Using market value capital structure weights containing 18 percent debt and 82 percent equity, Cornell/Hirshleifer estimate the ILECs' weighted average cost of capital to be 9.15 percent. Their final recommended weighted average cost of capital of 8.63 percent is the midpoint of the range of estimates they found using book and market value capital structure weights.

14. As I explained in my previous affidavits, financial and economic theory require the use of market value weights to calculate the weighted average cost of capital because market values are the best measures of the amounts of debt and equity investors have invested in the company on a going-forward basis. Furthermore, investors measure the risk and return on their investment portfolios using market value weights because they purchase a company's stocks and bonds at market price, not at book value. Thus, the return, and the risk or uncertainty of the return, can only be measured in terms of market values.

15. As I also explained in my previous affidavits, economists unanimously reject the use of book value capital structures to estimate the weighted average cost of capital because book values depend on arbitrary accounting conventions, are based on historical costs, and are inherently backward looking. I have taught corporate finance for more than 25 years, and I have never encountered a financial or economic text that recommended anything other than the use of market value weights to calculate a company's weighted average cost of capital. For example, the following well-known texts recommend the use of market value weights to estimate the weighted average cost of capital: Copeland/Weston, *Financial Theory and Corporate Policy*, Chapter 13, Third Edition, 1988, Addison-Wesley, Reading, MA.; Brealey/Myers, *Principles of Corporate Finance*, Chapter 9, page 214, Fifth Edition, 1996, McGraw-Hill; Robert C. Higgins, *Analysis for Financial Management*, Chapter 8, Fourth Edition, 1995, Irwin.

16. In contrast to the testimony he provides in this proceeding, Dr. Cornell clearly recommends the use of a firm's target market value capital structure, not its book value capital structure, in his book, *Corporate Valuation*. On page 224 of his book he states, "The appropriate weights to use are the firm's ***long-run target weights stated in terms of market value*** [original emphasis]." On page 225, Professor Cornell writes,

> "It is also possible to avoid the circularity by estimating the long-run target weights directly. For example, the appraiser may assume that all the comparable

> firms have the same target capital structures. Given this assumption, the best estimate of the target capital structure is the average capital structure across the comparable firms. If the comparable firms are publicly traded, ***their market value weights can be calculated directly and averaged*** [emphasis added]."

Finally, on pages 228-229 of his book, he provides an example of the correct way to calculate the weighted average cost of capital:

> Table 7-8 puts all the pieces together and calculates FERC's weighted average cost of capital using the target financing weights chosen by management. ***Notice that the target weight of equity is significantly greater than the book value weight. This reflects management's realization that the market value of equity is much greater than the book value.*** [emphasis added]

17. Cornell/Hirshleifer also approvingly quote from a book by Copeland, Koller, and Murrin, entitled, *Valuation: Measuring And Managing The Value Of Companies*, and by Damodaran, entitled, *Damodaran On Valuation: Security Analysis For Investment And Corporate Finance*. Cornell/Hirshleifer fail to note that both Copeland, Koller, and Murrin and Damodaran clearly recommend the use of market value capital structure weights to calculate the weighted average cost of capital. Specifically, Copeland, Koller, and Murrin state at page 240 that one must "employ market value weights for each financing element, because market values reflect the true economic claim of each type of financing outstanding, whereas book values usually do not." Damodaran, at page 41 in the section titled, "Calculating the Weights of Debt and Equity Components, Market-Value versus Book-Value Weights," states:

> The weights assigned to equity and debt in calculating the weighted average cost of capital have to be based upon market value, not book value. The rationale rests on the fact that the cost of capital measures the cost of issuing securities, stocks as well as bonds, to finance projects and that these securities are issued at market value, not at book value.

18. In defense of their use of a book value capital structure to measure the ILECs' weighted average cost of capital, AT&T and Cornell/Hirshleifer argue that: (1) the network access business is a low risk "quasi-monopoly;" (2) low risk businesses can support a higher level of debt in the capital structure; [Cornell/Hirshleifer at page 25]; (3) the holding company

book value capital structure is reasonable because the RHCs were "traditional monopolistic local exchange" companies at the time equity was "recorded on their books at what was then market value" [Cornell/Hirshleifer at page 25]; and (4) "LEC affiant" Dr. Vander Weide has recommended that state utility commissions adopt book value capital structures in his previous testimonies [AT&T at pages 19—20].

19. AT&T's first argument, that the network access business is a "quasi-monopoly," is extensively refuted in both my initial and reply affidavits. I specifically demonstrate in my prior affidavits that the interstate access market, the subject of this proceeding, has been opened to full competition since the mid-1980's, and competitors have specifically targeted this market because of the strong economic incentive competitors have to avoid paying the 25 percent of the cost of the local loop that is allocated to interstate access services. Indeed, I provided evidence that competitors are attracting more than 50 percent of net new business adds; and that investors are expecting competitors' market share to dramatically increase in the near future. AT&T's testimony does not address any of these factors or data.

20. AT&T's second argument, that a low risk firm can support a higher level of debt in its capital structure, is theoretically correct. In practice, however, I have presented evidence in my prior affidavits that firms which AT&T claims are less risky *do not* have a higher level of debt in their capital structures. AT&T's testimony claims, for example, that the RHCs are less risky than the S&P Industrials. Yet the evidence I have presented shows that the RHCs and the S&P Industrials have approximately the same market value capital structures. Given this evidence, either AT&T must accept that less risky firms do not have more debt in their capital structures, or they must accept that the S&P Industrials are a good risk proxy for the RHCs.

21. AT&T's third argument, that the holding company book value capital structure is reasonable because the RHCs were "traditional monopolistic local exchange companies" at the